Amendments to the Claims

Listing of Claims:

Claims 1 - 14 (canceled).

Claim 15 (new). A filter element for filtering electromagnetic waves, containing

a dielectric, cylindrical resonator;

one or more lines for supplying or drawing off electromagnetic waves to or from said dielectric resonator;

a contacting structure, said lines terminating in said contacting structure;

said lines and said contacting structure forming a part of a printed circuit board;

wherein said resonator is supported by said printed-circuit board;

said resonator is spaced from said contacting structure; and

said printed circuit board is formed with a recess and said resonator is held in said recess by way of a securing means.

Claim 16 (new). The filter element according to claim 15 configured as a bandpass filter or a band-stop filter.

Claim 17 (new). The filter element according to claim 15 configured as a reflection filter.

Claim 18 (new). The filter element according to claim 15 wherein said recess is dimensioned to enable self-centering fitting or mounting of said resonator.

Claim 19 (new). The filter element according to claim 15, wherein said securing means for securing said resonator is selected from the group of adhesive and silicon.

Claim 20 (new). The filter element according to claim 15, wherein each said line terminates in a separately embodied contacting structure.

Claim 21 (new). The filter element according to claim 15, wherein two or more lines terminate in a commonly embodied contacting structure.

Claim 22 (new). The filter element according to claim 15, wherein said contacting structure sickle-shaped at least in sections thereof.

Claim 23 (new). The filter element according to claim 15, wherein said contacting structure is formed as an annulus structure.

Claim 24 (new). The filter element according to claim 15, wherein said contacting structure is a circular-arc segment having a variable aperture angle less than 360°.

Claim 25 (new). The filter element according to claim 15, wherein said lines are two lines and said contacting structure is a circular-arc segment having a variable aperture angle of approximately 160°.

Claim 26 (new). The filter element according to claim 15, wherein said lines are three lines and said contacting structure is a circular-arc segment having a variable aperture angle of approximately 110°.

Claim 27 (new). The filter element according to claim 15, wherein said lines are four lines and said contacting structure is a circular-arc segment having a variable aperture angle of approximately 75°.

Claim 28 (new). The filter element according to claim 15, wherein said contacting structure has larger dimensions than said cylindrical resonator.

Claim 29 (new). The filter element according to claim 15, wherein said contacting structure has smaller dimensions than said cylindrical resonator.

Claim 30 (new). The filter element according to claim 15, wherein said resonator is substantially centered relative to said contacting structure.

Claim 31 (new). The filter element according to claim 15, wherein said resonator has an operating frequency above 18 GHz.

Claim 32 (new). A filter element, comprising:

a dielectric, cylindrical resonator;

one or more lines for supplying or drawing off electromagnetic waves to or from said dielectric resonator;

a contacting structure, said lines terminating in said contacting structure;

a retention area or cover disposed in close proximity to said contacting structure;

said resonator being held in place by said retention area or said cover;

said resonator being variably spaced from said contacting structure; and

said retention area or said cover being formed with recess, wherein said resonator is held by way of securing means.

Claim 33 (new). The filter element according to claim 32 configured as a bandpass filter or a band-stop filter.

Claim 34 (new). The filter element according to claim 32 configured as a reflection filter.

Claim 35 (new). The filter element according to claim 32, wherein said recess is dimensioned to enable self-centering fitting or mounting of said resonator.

Claim 36 (new). The filter element according to claim 32, wherein said securing means for securing said resonator is selected from the group of adhesive and silicon.

Claim 37 (new). The filter element according to claim 32, wherein each said line terminates in a separately embodied contacting structure.

Claim 38 (new). The filter element according to claim 32, wherein two or more lines terminate in a commonly embodied contacting structure.

Claim 39 (new). The filter element according to claim 32, wherein said contacting structure sickle-shaped at least in sections thereof.

Claim 40 (new). The filter element according to claim 32, wherein said contacting structure is formed as an annulus structure.

Claim 41 (new). The filter element according to claim 32, wherein said contacting structure is a circular-arc segment having a variable aperture angle less than 360°.

Claim 42 (new). The filter element according to claim 32, wherein said lines are two lines and said contacting structure is a circular-arc segment having a variable aperture angle of approximately 160°.

Claim 43 (new). The filter element according to claim 32, wherein said lines are three lines and said contacting structure is a circular-arc segment having a variable aperture angle of approximately 110°.

Claim 44 (new). The filter element according to claim 32, wherein said lines are four lines and said contacting structure is a circular-arc segment having a variable aperture angle of approximately 75°.

Claim 45 (new). The filter element according to claim 32, wherein said contacting structure has larger dimensions than said cylindrical resonator.

Claim 46 (new). The filter element according to claim 32, wherein said contacting structure has smaller dimensions than said cylindrical resonator.

Claim 47 (new). The filter element according to claim 32, wherein said resonator is substantially centered relative to said contacting structure.

Claim 48 (new). The filter element according to claim 32, wherein said resonator has an operating frequency above 18 GHz.

Claim 49 (new). In an oscillator configured for radar systems, LMDS distribution services, or satellite receivers, the filter element for filtering electromagnetic waves according to claim 32.

Claim 50 (new). In an oscillator configured for radar systems, LMDS distribution services, or satellite receivers, the filter element for filtering electromagnetic waves according to claim 15.